



equinor

EMPIRE WIND

Why Offshore Wind?

New York's coast hosts some of the world's best winds¹

- Wind blows stronger and more consistently offshore
- For Empire Wind, the offshore wind speed is highest during the afternoon and evening, when consumer demand is high
- Wind is homegrown energy for New York
- Wind is an excellent source of renewable energy for large coastal population centers like New York

WHAT THE EXPERTS SAY:



The South Shore of Long Island was devastated by Super Storm Sandy and is at high risk for flooding due to its low elevation.² The community already suffers from nuisance flooding and sea level rise is a critical threat.³ Transitioning from fossil fuels to address climate change would help prevent worst-case scenarios.



According to the **National Audubon Society**, two-thirds of North American birds are at increasing risk of extinction from global temperature rise.⁴



The **Whale and Dolphin Conservancy** has raised the alarm that the rapid warming of the planet is impacting dolphins and whales through habitat loss, reduced prey availability, changes to migration timing and ranges, and even their ability to reproduce.⁵

Helping Meet New York State's Nation-leading Climate Goals

- 9 GW offshore wind by 2035
- 70% renewable energy by 2030
- 85% reduction in greenhouse gas emissions by 2050
- 100% zero-emission electricity by 2040

Delivering Clean, Renewable Energy—and an Economic Stimulus

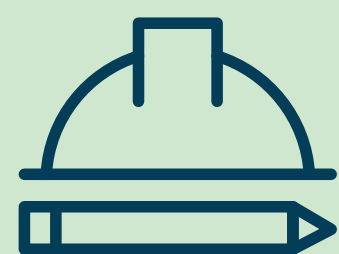
- Creating good-paying jobs
- Creating business opportunity
- Advancing a Just Transition
- Engaging communities
- Boosting energy security

Communities, Jobs, Opportunity

Together, the Empire Wind and Beacon Wind projects will deliver:



Learn more from our sources!



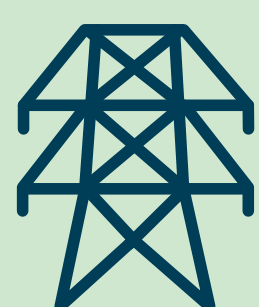
THOUSANDS OF JOBS



THE EQUIVALENT TO REMOVING 1.3 MILLION CARS ANNUALLY



ALMOST \$2 BILLION IN HEALTH BENEFITS



NEEDED UPGRADES TO THE ELECTRIC GRID



BILLIONS IN ECONOMIC DEVELOPMENT



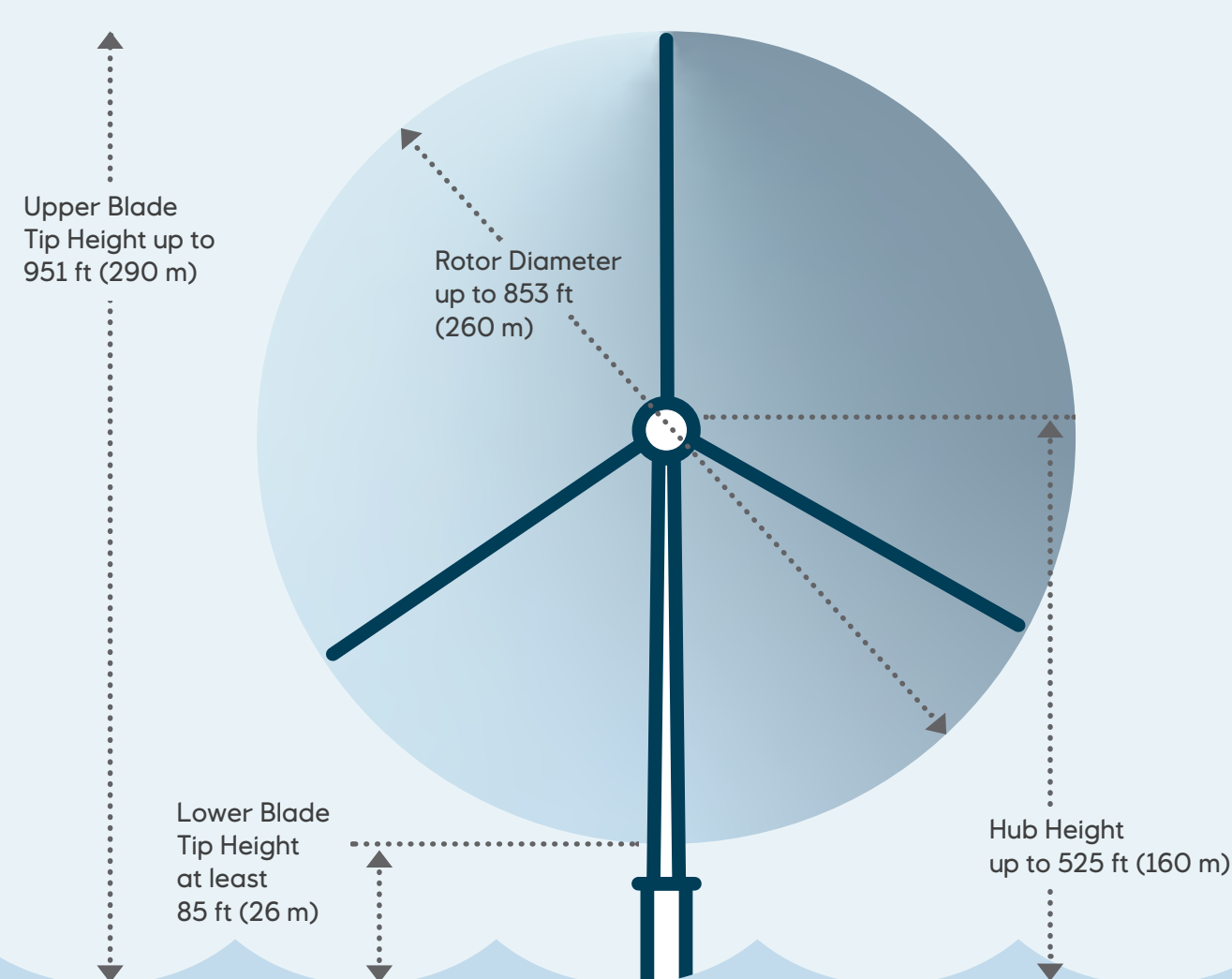
MILLIONS IN PUBLIC/PRIVATE INVESTMENT

EMPIRE WIND

How Turbines Work

Empire Wind will use a variety of technologies to power offshore machinery and transport energy onshore to New York's electrical grid.

ONE ROTATION OF ONE TURBINE CAN POWER A HOME FOR ~1.5 DAYS.



**The wind turbine depicted is for illustrative purposes.*

Offshore Wind Turbine Components

Tower: Steel tubular section supporting rotor and nacelle, and providing required height

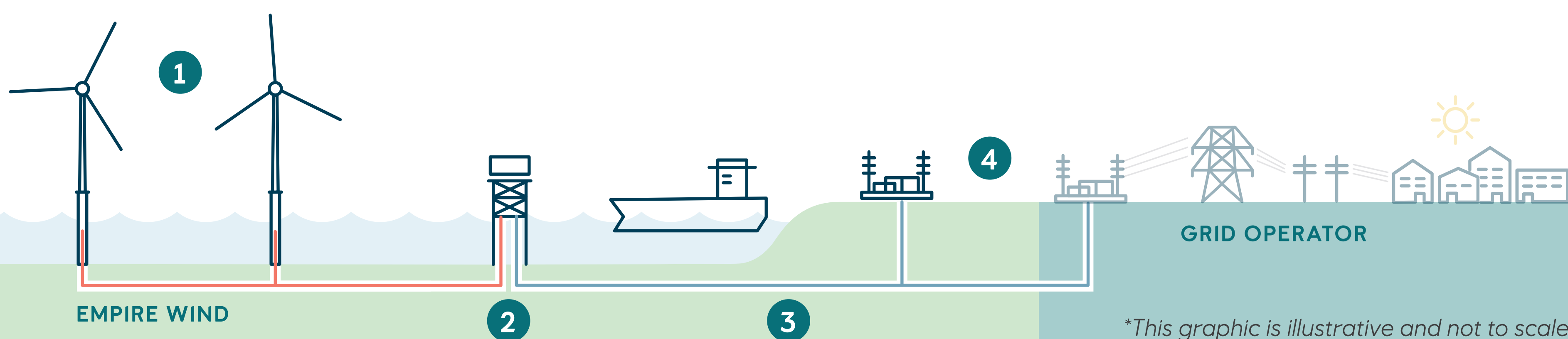
Nacelle: Box-like structure at top of tower housing electro-mechanical components of wind turbine

Rotor: Consists of three blades and hub (where blades connect)

Height to upper blade tip: Up to 951 ft

Rotor diameter: Up to 853 ft

From Empire Wind to Your Home



**This graphic is illustrative and not to scale.*

- Up to 147 turbines convert wind to electricity. This will include both Empire Wind 1 and Empire Wind 2. The final total of turbines will be determined through the federal environmental assessment process.
- The two offshore substations collect the electricity from the turbines through up to 260 nautical miles (nm) (299 miles) of interarray cables.
- From the offshore substations the electricity is sent onshore through up to five submarine export cables, consisting of two 66 nm (76 miles) long cable routes to New York; up to two cables and 40 nm (46 miles) to the EW1 landfall in Brooklyn and up to three cables and 26 nm (30 miles) for the EW 2 landfall in Long Beach.
- For Empire Wind 2, the electricity will travel through up to three tri-foils cable circuits buried underground within the approximate 1.5-mile-long corridor from the landfall in Long Beach to the substation proposed in Island Park and then through the approximately 1.7-mile-long corridor from the substation to the point of interconnection to the electricity grid in Oceanside. The Empire Wind project ends and the electrical grid begins at the point of interconnection.

Panoramic Simulation



Empire Offshore Wind: Empire Wind Project (EW 1 and EW 2) | Ocean Beach Park